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ABSTRACT

In an attempt to meet the need for improved skills in the local workforce, San Juan College (New Mexico) made efforts to locate a target population of students and find out how successfully the courses they took met their work needs. A computer search identified a trial population of 513 students who met a set of criteria that suggested they took courses for job skills improvement. Telephone interviews were successfully conducted on 56% of the students to determine their primary reason for taking a course, satisfaction with the course and goal achievement, previous course enrollment to improve job skills, employment information, future enrollment plans, and demographic information. Results indicated that 65% of the interviewed students took vocational courses to improve job skills, with an 84% rate of high satisfaction. Almost all of the students were employed and said their job performance improved as a result of taking the course. Even those not seeking to improve job skills were highly satisfied with the courses, and most respondents plan to continue taking San Juan College courses in the future. Appendices include documentation of study methods, instructions to telephone interviewers, employer questionnaires, and data tables. (YKH)

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SAN JUAN COLLEGE

Meeting the Need for Improved Skills in the Local Workforce

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Office of Institutional Research, Grant Development and Planning
December 15, 1997

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Mary Jo Clark
Farmington, New Mexico
December 15, 1997

San Juan College:
Meeting the Need for Improved Skills
In the Local Workforce

EXECUTIVE SUMMARY

* Telephone interviews were held with 287 "occasional" students enrolled in one or two career or vocational courses at San Juan College in fall 1996 or spring 1997, or about 25 percent of all students enrolled in only one or two vocational courses during this year.

* Almost two-thirds (65%) said their primary reason for taking a course was to improve job skills. Goal achievement and course satisfaction were rated high or very high in more than 80 percent of the courses. Employment while taking the course was 97 percent, and 88 percent said their work performance improved as a result of taking the course.

* Among those taking a course to improve work skills, most (86%) expected to take future courses at San Juan College for the same purpose (74%) or for personal interest. Almost half (43%) of these respondents already had earned a four-year degree, completed graduate study, or earned a certificate or two-year degree someplace other than San Juan College.

* Calls to 61 employers (81%) of the 75 names supplied by respondents elicited overwhelming support for the helpfulness of the San Juan College courses taken by their employees. Fifty-seven of the 61 supervisors interviewed (93%) rated a class helpful or very helpful to their workers. Work skills improved by the courses included specific skills (such as operation of computer programs, welding, auto engine diagnosis), critical knowledge of a business or industry (such as in banking and real estate sales), better management skills, and greater efficiency on the job.

* Another 25 percent of student respondents said they took these courses for personal interest. Four out of five rated goal achievement and course satisfaction high or very high. Most (83%) said they expected to take future courses at San Juan College, 67 percent for personal interest but also 21 percent to improve job skills. More than half (51%) of these students already had a two-year degree or higher from some other institution.

* Exploratory aspects of the study found that very few students took selected arts and science courses to improve job skills. The major exception was Spanish, where 26 respondents reported that they took the course to improve their ability to communicate in Spanish on the job.

* With regard to telephone survey methodology, 60 percent of targeted students enrolled a year earlier were reached and interviewed at reasonable cost in both time and money. Only 3 percent of those reached were reluctant in any way to participate in the project. In general, volunteered opinions about San Juan College were very high.

San Juan College:
Meeting the Need for Improved Skills in the Local Workforce

A college offering courses of study leading to degrees or certificates that are valued by local employers clearly contributes to the economic development of an area. But what about workers already on the job who need new skills to keep up with changing technology or job structures? Short of working for a degree or certificate, how do employees obtain the skills needed for work improvement or job advancement? One way might be to take appropriate courses as "occasional" non-degree students at the local community college. Can a college demonstrate that students enroll in courses primarily for the purpose of improving their work skills and that the courses are successful in meeting these needs?

These are some of the questions that led to this exploratory effort to locate a target population of students at San Juan College who took courses primarily to improve their job skills and to find out how successfully the courses they took met their needs at work. Since the college does not ask students whether or not they are employed or why they enroll in particular courses, it was necessary to develop some other way of locating these students. The method selected was to identify the most likely enrollment profile of such students and then to contact the identified students and their employers for more information. This study reports the results of an effort to accomplish these tasks.

Trial Profile of Target Students

Students most likely to be taking occasional courses to improve their job skills were expected to have the following characteristics:

1. Enrolled at San Juan College as a provisional or non-degree student.

2. Enrolled for fewer than 9 credits a semester (e.g., taking one or two courses at a time) with fewer than 30 cumulative credits earned at San Juan College and a minimum 2.0 cumulative grade average.

3. Enrolled in at least one course in a career or vocational field designed to prepare students for direct entry into the workforce. At San Juan College, these courses fall generally in the fields of business management, accounting, and secretarial studies; skills courses in using a computer; and trades, education and health courses such as automotive technology, drafting, welding, early childhood education, and medical terminology. Courses in structured career or vocational programs available only to those working toward a certificate or degree (such as nursing or aviation technology) were not included. To test whether some general education courses also might be taken to improve job skills, selected arts and science courses were included in these exploratory criteria.

Appendix I details the exact criteria used to select the target population.

A computer search was conducted of all enrollments in Fall 1996 or Spring 1997 to locate students who met the selection criteria and 513 students were identified. These 513 students constituted the subjects of this study.

It should be noted that, without the criteria of non-degree and fewer than 30 cumulative credits, 1,102 students were identified in 1996-97 enrollments as taking fewer than 9 credits including at least one targeted course. Thus, fewer than half of the part-time students taking work-related courses met the specific definition of "occasional" students used in this study. At least twice as many students are pursuing job training one or two courses at a time, with or without the eventual expectation of completing a degree or certificate.

Data Collection

Telephone interviewing was selected as the method of student data collection in an effort to get reliable information as quickly as possible from as many of the subjects as possible. A telephone interview schedule was prepared that concentrated on a limited amount of information:

1. What was the student's primary reason for taking a targeted course? (Courses on the student's schedule that are not listed in Appendix I were ignored. Though all targeted courses were considered potentially job-related, some occasional students might have taken any given course for other reasons. Therefore, subjects were asked to identify their primary reason for taking the course from several options. Often a student would have at least two reasons for taking the course; in this case, taking the course to improve job performance was given priority.)

2. The student's rated satisfaction with the course and with goal achievement.

3. For students not taking a course to improve job skills, previous enrollment in courses primarily to improve job skills.

4. For students taking course(s) to improve job skills, employment information and request for permission to interview the employer regarding helpfulness of the course.

5. Plans regarding future enrollment at the college.

6. Demographic information.

A complete copy of the student interview questionnaire, including a tabulation of results, can be found in Appendix II.

The student telephone interviews were conducted by trained interviewers at San Juan College in September and October, 1997. Details of the interviewing process can be found in Appendix I.

A brief employer interview schedule was prepared (see Appendix III) and calls to employers were made by the project director in November, 1997.

Results

Questionnaire Response Rate. Efforts were made to reach each of the 513 identified subjects by telephone, using the address and telephone number provided by the student at his or her most recent enrollment at San Juan College. Results were as follows:

Interviews completed	287	56%
Early childhood education special students	26	5%
No phone/disconnected/moved	124	24%
No answer with repeated calls	63	12%
Preferred not to participate	13	3%

The number of 1996-97 occasional students who could not be reached (36%) reflects a relatively high mobility of the San Juan County population, and the relative isolation of parts of the county where phone service is sparse. At least 20 of these former students were out of the area attending other colleges, according to reports of family members. Students with working phones who could not be reached despite as many as 8 or 10 attempts had unanswered telephone numbers, phones answered only by machines, or were never at home when survey calls were made.

Almost 40 percent of former San Juan College students who could not be reached for telephone interviews or declined to participate is almost exactly the same ratio as obtained in a telephone interview study of previous year enrollees conducted by the college in 1990 (Clark, 1990.)

The 26 special early childhood education students were teachers in primarily Native American preschool and elementary Catholic parochial schools in the Diocese of Gallup and in the Lumberton area, where off-campus courses relevant to their work were available by special arrangement. Most of these students volunteered their teaching services and by Fall 1997, when the study was conducted, many of them were no longer living in the area. Although not interviewed individually, they met the criteria for inclusion in the study and their supervisors in the Diocese were extremely positive about the effects of the courses on their work.

Another group of early childhood education students, some of whom are in the interviewed group, are working in Head Start programs or at other child care centers and participate in a special program at the college to help them complete the 120 training hours for federal Child Development Associate (CDA) designation or to meet the state required 24 clock hours of training per year for employment in this area. These are not college degree or certificate programs, and students usually participate in them one or two courses at a time, but they do constitute structured programs that may not completely meet this study's definition of "occasional" students.

A third group of special cases that showed up in the interviewed group were at least five high school students taking one or two courses for college credit.

Some people in the interviewed group traveled long distances to take courses for job improvement: two from Dulce, five from Durango, one from Hesperus, one from Sheepsprings, and six from Shiprock.

As can be seen from Table 1, there were few marked differences between the interviewed and not reached groups in terms of home location (zip codes), enrollment status, or fields of the targeted courses that were taken. Subjects not reached tended to live somewhat further away from campus, more frequently withdrew from their courses, and took slightly fewer computer courses and more arts and science courses. However, none of these differences were large or striking. The number of occasional students residing in the immediate Farmington area (about 75%) is almost exactly the same as for the total student population.

TABLE 1

Comparison of Interviewed and Not Reached Subjects

	INTERVIEWED		*NOT REACHED*	
	N	**%**	**N**	**%**
Number of Subjects	287 (+26*)		200	
Geographic Location				
Farmington, Aztec, Bloomfield, Flora Vista	235	75%	141	71%
Kirtland, Fruitland, Waterflow, LaPlata	32	10	33	17
Indian Reservations (Window Rock to Dulce)	13	4	21	10
Off-Campus Early Childhood Ed. Students	(26)**	(8)		
Colorado & Other States	7	2	5	2
Enrollment Status				
Audited Courses	17	5	8	4
Withdrew from Courses	13	4	26	13
Course Area (318 Courses)				
Business	102	32	57	29
Computers	81	25	40	20
Tech/Ed/Health	76*	24	54	27
Arts & Science	59	19	48	24

* Plus the 26 off-campus Early Childhood Education students

** Located but not individually interviewed

Reasons for Taking Courses. Students were asked to indicate a primary reason or goal for taking each targeted course and their evaluations of these courses on a scale from 5 to 1 with 5 as a very high rating and 1 as very low. The courses were grouped into four categories:

> ***Business*** including management, accounting, and secretarial courses. Some of the most frequently taken courses were introductory accounting, supervision, principles of banking, real estate law, real estate appraisal, college keyboarding, Microsoft Word for Windows, and WordPerfect.
>
> ***Computer Science***. Some of the most frequently taken courses were introduction to computers, spreadsheeting, business microcomputer applications, and special topics courses.
>
> ***Technology, Education, and Health***. Some of the most frequently taken courses were special topics in auto body, automotive technology, machine shop, and welding (carpentry should be on this list too, but was inadvertently left out of the list of targeted courses;) computer aided drafting, early childhood education, medical terminology and substance abuse.
>
> ***Arts and Sciences***. Although students took targeted courses from nine different disciplines, most enrollments were in Spanish (26) human anatomy and physiology (6) and introductory chemistry (5).

Specific course enrollments of all interviewed students are reported in Appendix IV.

As can be seen in Table 2, about two out of three respondents who took a career or vocational course in the fields of business, computers, or technology/education/health said they took the course to improve their job skills. The other primary reason for taking occasional career or vocational courses was for personal interest (one out of four respondents); fewer than 10 percent of occasional students taking vocational courses said their primary motivation was to earn credits toward a degree or certificate. In contrast, occasional students taking targeted arts and science courses were only about half as likely to be taking the course to improve job skills (32%), with other reasons split about evenly between earning credits toward a degree or certificate or for personal interest.

Students who said they took a course for credit toward a degree or certificate often were working toward degrees at other colleges, such as courses to transfer or general physics or human anatomy and physiology as prerequisites for admission to a degree program elsewhere. Other courses for credit were taken as part of programs toward teacher certification through Fort Lewis College or the University of New Mexico, or bachelor's degree graduates taking courses at the community college for jobs in business. At the other extreme were students still in high school taking college courses for credit prior to officially enrolling in college.

Students who took technical courses for personal reasons tended to be enrolled in special topics courses offered in the late afternoon or evening such as auto body repair, engine performance diagnosis, diesel small engines, basic welding, gunsmithing, basic woodworking, or sign language for the deaf.

TABLE 2
Enrollment in Work-related Courses
(In Percentages)

	BUS	COSC	TECH/ED /HLTH	ARTS	TOTAL
Number of Respondents	102	81	76	59	318*
Course Goal					
Improve Job Skills (choices 1 & 2)	66%	67%	61%	32%	59%
Earn Credits Toward Degree	7	7	9	34	13
Personal Interest	25	25	26	31	26
Other	2	1	4	3	3
Goal Achievement					
High (ratings 4 & 5)	86	83	82	71	81
Low (ratings 1 & 2)	1	5	5	10	5
Satisfaction with Course					
High (ratings 4 & 5)	84	83	76	83	82
Low (ratings 1 & 2)	4	6	4	5	5
Course Grades					
A or B	78	81	78	78	79
Audit	4	6	8	3	5
Withdrew	5	2	2	7	4

***Note:** The data base includes one "marker" target course for every respondent (N=287); in addition, 31 respondents reported a second course taken to improve job skills. These courses have also been included for a total N of 318 courses. A listing of all of the targeted courses taken by respondents and their reasons for taking each course may be found in Appendix IV.

About four out of five respondents (81%) rated the course they took high or very high in goal achievement (e.g., taking the course achieved their major reason or goal of enrollment) regardless of the field or their reason for taking the course, with slightly lower ratings among those taking arts and science courses. Reasons for low ratings of goal achievement included having a goal of changing careers and needing more preparation before this could happen; taking the course for a new job but didn't get the job; and high satisfaction with the course but "I didn't learn more about my computer."

General satisfaction with the course (with organization of the course, quality of instruction, labs, etc.) was equally high, with more than four out of five respondents (82%) rating the course high or very high. Most of the students also earned good grades in the targeted courses -- four out of five received grades of A or B. Five percent of respondents audited the course, while four percent withdrew from the course.

It should be noted that most of these occasional students took a work-related course in only one of the two semesters included in this study, with about 55 percent enrolled during fall semester and 45 percent enrolled in spring semester. Only 19 respondents (7%) said they took a course to improve job skills in both semesters. Also, almost all of the targeted courses taken by these students were offered during the late afternoon or evening hours, maximizing their availability to community members working full-time.

Job-Related Respondents. Most of the students who said they took one or more targeted courses to improve job skills answered a set of questions regarding their employment at the time of enrollment. Almost all said they were employed at the time they took the courses (97%,) and 50 percent said their employer paid all of the expenses of taking the courses while another 12 percent said their employer paid part of the expenses.

Respondent opinions about the effect of the course(s) on job performance were overwhelmingly positive; 88 percent said their performance on the job improved as a result of taking the course(s). Those who responded negatively added explanations such as job responsibilities changing during the course, course work not yet in enough depth to be very helpful (e.g., computer usage or Spanish), or not the same computer programs as available at work.

When asked for permission to call their supervisor at work to ask his or her opinion about the contribution of the course(s) to the respondent's job performance, 75 respondents taking job improvement courses (52%) provided the information necessary to make these contacts. Reasons given for not providing an employer's name and phone number included being self-employed (20%), supervisor no longer with the employer (11%), skills of the course not used at work, took the course for a different job, no longer employed by the company, and preferring that we not call.

Employer Interviews. All but 14 of the 75 employer names provided by respondents (81%) were reached for telephone evaluations of the helpfulness of the listed courses to their employees. Fifty-seven of the 61 (93%) said the course(s) taken by their employees contributed to the student's job performance. Some courses provided specific job skills (such as ability to operate specific computer programs, diagnose auto engine problems, do surveying or drafting work, or perform welding duties) while others contributed to supervisory skills, job confidence, or critical knowledge of an industry (such as banking or real estate.) Often the course was important to job advancement or transfer, or for state licensing in fields such as real estate sales.

The employers included city and county governments, public schools, oil and gas companies, architectural and construction firms, banks, insurance and real estate companies, agencies on the Navajo reservation, power plants, health organizations, and retail establishments.

All of the work supervisors who were interviewed supported the work that San Juan College is doing to provide courses that can be taken by their employees to improve work skills. They particularly commended the flexible scheduling of courses; the availability of general communications courses as well as supervision, human relations, and skills courses in the evening; and the helpfulness of directors at off-campus centers in making arranging to offer courses at times and locations more convenient to the employer. Particularly in banking and real estate, many of the courses were taught by the professionals called to provide worker evaluations.

Non-Job Related Respondents. Respondents who said they enrolled in targeted courses for personal reasons or to earn credits toward a certificate or degree were asked if they had ever taken a course at San Juan College primarily to improve their job skills or obtain a promotion at work. Only 36 respondents (27% of those taking courses for non-job related reasons) answered "yes."

Among those who took courses to improve job skills at some earlier time, respondents mentioned mathematics, accounting, management, word processing, technical writing, marketing, insurance courses, and early childhood education. Almost all (85%) said the courses were helpful or very helpful to them on the job.

Respondent Characteristics by Reason for Taking the Course. Table 3 summarizes student responses to a few questions of general interest.

Among students in this survey, 64 percent were female, slightly higher than the total number of women in the Fall 1996 census headcount of 62 percent. Proportionately more women (80%) were in the group who said they took target courses for credit toward a degree, while proportionately more men (42%) were among those taking courses for personal interest.

Ethnic identifications of respondents were 13 percent Native American (compared to 25% in the fall enrollment) and 10 percent Hispanic (compared to total enrollment of 11%). Proportionately, Native Americans (23%) were more likely to be taking these courses for credits toward a degree or certificate.

When asked whether or not they expected to take other courses at San Juan College from time to time, most respondents (85%) said "yes," while another 10 percent said they were uncertain. The likely primary reasons for taking future courses were similar to reasons for current enrollment -- students currently enrolled to improve job skills were most likely to take future courses for the same reason (74%), while credits toward a degree students were 81 percent likely to take future courses for the same reason and personal interest students were 67 percent likely to remain the same in the future. It is interesting to note, however, that about one personal interest student out of five said he or she is likely to enroll in the future to improve job skills, and almost the same proportion of degree students expect to make the same switch.

Almost all students taking courses to improve work skills (98%) said they were currently in the workforce, either employed full time (87 %), employed part time (7%) or looking for work. Those taking courses to earn credits toward a certificate or degree were more likely to list their occupation as student (18%), homemaker (13%), or employed part time (15%.) The predominant

TABLE 3
Results by Reason for Taking a Course (In Percentages)

REASON FOR TAKING COURSE	WORK	DEGREE	PERSONAL	TOTAL
Number of Respondents	186 (60%)	40 (13%)	84 (27%)	310*
Gender: Female	63%	80%	58%	64%
Male	37	20	42	36
Ethnicity: Native American	12	23	11	13
Hispanic	11	8	7	10
Expect to take future San Juan College Courses				
Yes	86	93	83	86
No	6	3	4	5
Uncertain	8	5	13	9
Reason for Future Courses				
Work	74	17	21	52
Credit toward Certificate or Degree	10	81	11	20
Personal	16	3	67	28
Occupation				
Employed Full-Time	87	55	58	75
Employed Part-Time	7	15	11	9
Looking for Work	4	–	4	3
Student	1	18	2	4
Homemaker	1	13	12	5
Retired	1	–	10	3
Other	–	–	4	1
Highest Educational Degree				
Less than High School Graduate	1	10	4	3
High School or GED	19	18	8	16
Some College	37	40	37	37
Certificate or 2-year Degree	14	8	7	11
4-year Degree	19	23	25	21
Graduate Study	10	3	19	11
San Juan College Degree Student Now				
Yes	15	48	4	16
No	72	50	89	74
Maybe in Future	12	3	7	10

* Eight Students who said they took courses for "other" reasons are not reported.

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occupation of those taking courses for personal interest was also full or part time employment (69%) with a substantial representation of homemakers (12%) and retired (10%.)

Close to half of all the responding occasional students (43 to 45%) reported that they had already completed a certificate or two-year degree program, a bachelor's degree, or graduate study. Those most likely to have already received such degrees were taking courses for personal interest (51%) or to improve job skills (43%). Students taking courses for credit toward a certificate or degree had the most varied educational backgrounds, from 28 percent with high school degrees or less to 26 percent with completed bachelor's or graduate degrees.

When asked if they currently were working toward a degree or certificate from San Juan College, most respondents (86%) said "no." Degree students were mostly those who said they took a career or vocational course for credit toward a degree with 58 percent indicating current degree enrollment at San Juan College. Some of the respondents indicated that they might enroll for a degree or certificate at some time in the future, including 12 percent of the students taking courses to improve job skills.

Comments. Comments volunteered to telephone interviewers by respondents were almost all quite positive, including statements like "I'm happy San Juan College is in the area", "it's wonderful that I live in a town with such a great college", "San Juan College is the best thing going for Farmington", and "the teacher was wonderful." There were also, of course, some indications of weakness, primarily regarding a poorly organized or poorly prepared instructor or course content that was inadequate preparation for the next course level. Since this is only a small sampling of students enrolled in any given class a year or more ago, there was no effort to compile these remarks in a systematic way. It is likely, however, that most of the problems were reported to supervisors on individual course evaluations at the time each course was being taught and that, where appropriate, action has already been taken regarding these complaints. Since a majority of these courses were taught at night, it is also likely that many of the complaints were with regard to part-time faculty members.

Several respondents complimented the college on excellent up-to-date instructional equipment.

Suggestions included more computers and computer classes in Kirtland, more evening classes, more lab time in Introduction to Computers, and a database management course offered on a one evening per week schedule.

Discussion and Summary

This study was conducted to test the hypothesis that San Juan College helps meet the needs of local employers by offering courses that can be taken to improve the work skills of current employees. The courses of particular interest in this study were part of the college's regular curriculum; a separate contract training program was offering courses to meet specific immediate training needs of employers. The results indicate that a substantial number of part-time students took courses for job improvement, that more than 80 percent of them said the courses helped them in their work, and that their employers concurred in this positive assessment.

A recent article summarizing work done by the Washington State Board for Community and Technical Colleges (Simmons, 1997) notes that the needs and training outcomes of students who are already employed and who enroll in courses for job-related training with no intent of earning a degree or certificate are largely invisible to or misunderstood despite the fact that community and technical colleges enroll many of these students. Simmons suggests more customer satisfaction surveys as the most appropriate way to assess college service to this important constituency. The current study is an example of efforts to collect information on the customer satisfaction of a similar group of students at San Juan College, and to verify the results of training impact with the opinions of work supervisors.

In summary, the study found that:

- According to the San Juan College Fact Book for 1996, 2,313 students or 55 percent of all students enrolled for credit Fall 1996 were taking one or two courses. Those enrolled in at least one of the job-related courses targeted by this study (about 600 students Fall 1996) represented an estimated 25 percent of this larger total number of students enrolled in one or two courses.

- The study demonstrated that telephone interviews can be used to reach about 60 percent of students who took targeted courses a year earlier, and that the survey information can be gathered reasonably economically in terms of both time and cost.

- Almost two-thirds (65%) of the interviewed students said their primary reason for taking one or two career or vocational courses was to improve their job skills. Another 25 percent said they took these courses for personal interest and 10 percent for credits toward a certificate or degree. Nearly half (43%) of these students had already earned a certificate or college degree from some other college or university. Most of these students were employed (84%); many were enrolled in courses scheduled in the late afternoon or evening.

- Most students (84%) rated their career or vocational courses "high" or "very high" in goal achievement (e.g., taking the course achieved their major reason or goal of achievement) and 82 percent gave high or very high ratings to satisfaction with the course in general - quality of instruction, organization of the course, laboratory experiences, etc.

- Students taking courses to improve work skills were employed (97%) and many (62%) received partial or full reimbursement of tuition from their employers. Almost all (88%) said their performance on the job improved as a result of taking the course(s).

- Only about one in four students taking targeted courses to earn credits toward a degree or for personal interest reported that they had taken courses to improve job skills at some time in the past; but of this relatively small number, almost all (85%) said the courses were helpful or very helpful on the job.

- Students taking courses for credit toward a degree or for personal interest also rated their courses very highly in goal achievement and general satisfaction. More than half (51%) of

the students taking courses for personal interest had already completed a college degree; many of those taking courses for credit toward a degree were working toward teacher certification of for transfer of credit to another college or university.

- Most respondents (85 to 95%) expect to continue taking San Juan College courses in the future, mostly for the same reasons they took courses in 1996-97, but with about 20 percent of the degree or personal interest students expecting to take future courses to improve job skills.

- Only a few of the arts and science courses included in this study were taken by students to improve job skills. The most notable exception was Spanish. Clearly other courses in the arts and sciences are taken to prepare for work, but the competing immediate purpose is likely to be credit that will transfer to a four-year or teacher training program, or eventually a degree or certificate from San Juan College.

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APPENDIX I

DOCUMENTATION OF STUDY METHODS

An objective of this follow-up study was to determine the feasibility of locating and obtaining useful information from students who enroll in classes at San Juan College only occasionally. This appendix provides details of the study's methodology in the event that others might wish to carry out a similar study at some future time.

Study Design

The idea for the study was proposed in the college's 1997-98 request for funding from state Carl Perkins funds, and was funded for a line item sum of $3,850. The emeritus Director of Institutional Research and Planning was contracted to carry out the project during fall semester 1997. A proposal outlining objectives, procedures, final product, and budget was approved by the Vice President for Instruction in early September. It was expected that the project could be completed before Thanksgiving.

Selection of the Students to be Studied

The study design was to focus particularly on recent "occasional" students most likely to be taking courses to improve their performance at work. Courses taken only by students working toward a structured career degree or certificate, such as nursing or carpentry, were omitted, as were most arts and science courses taken to meet general education requirements in humanities, social sciences, and the arts. However, as noted below, a few arts and science courses were included for exploratory purposes. Within this general framework, courses most likely to be taken to improve work performance were identified as follows:

* BUSINESS: Any course in Business Administration, Business Education, Accounting, or Public Administration

* COMPUTERS: Any course in Computer Science

* TECHNOLOGY: Any course in the fields of Auto Body, Automotive Technology, Diesel Power Equipment Mechanics, Drafting and Design, Machine Shop, Welding, Human Services, Early Childhood Education, or Health (courses in Engineering, Media Technologies and Communication, and Computer Graphics were included but did not turn up in the list of courses taken. Carpentry should be added to the list.)

* ARTS: Any courses in Chemistry, Economics, Geology, Physics or Spanish; selected courses in Biology (mainly Human Anatomy and Physiology,) English (Advanced Technical and Professional Writing,) Mathematics 135 or above, Abnormal Psychology, or Speech (Public Speaking.) (Geography, Journalism, and

Photography courses above 200 were included but did not turn up in the list of courses taken.)

The following criteria were then developed for the selection of the target population:

1. Students enrolled Fall 1996 or Spring 1997 for less than 9 credits that included at least one of the courses listed above. Students enrolled for 9 credits or more in a given semester were considered no longer "occasional."

2. Admission as a provisional or non-degree student. Students admitted as regular or certificate/degree seeking were not considered to meet the criterion of "occasional" students, even though they might be taking less than 9 credits in a given semester.

3. Fewer than 30 credits earned cumulatively at San Juan College. A cumulative record of 30 or more credits was considered to be no longer "occasional", even though the student was still classified as non-degree seeking.

4. A cumulative grade point average of 2.0 or above, signifying generally satisfactory performance in the courses taken.

A computer search of Fall 1996 and Spring 1997 enrollments to meet the first selection criterion (enrollment for less than 9 credits including at least one of the listed courses) resulted in a list of 1,102 students. The application of criteria #2 and 3, provisional or non-degree status with less than 30 cumulative credits earned at San Juan College, eliminated 531 students; a cumulative grade point average of at least 2.0 (criterion #4) eliminated another 58 students, for a final target population of 513 students.

The final list of 513 students was randomly arranged by computer in preparation for selecting a sample for the study. However, based on earlier experience with efforts to locate prior students for telephone interviews (Clark, 1990,) it was anticipated that as much as 40 percent of the sample might not be reachable by phone . Therefore, since about 300 responses were desirable for maximum stability of the study's results (Anderson, et al, 1988; Frey, 1989) all members of the identified target population were retained in the study.

The college's Director of Institutional Research, Grant Development, and Planning carried out the computer work needed to complete these steps, after reviewing the selection criteria with the project director.

Interview Questionnaire Design

The project director drafted a questionnaire for the project based on the purposes of this study, a review of the literature, and questionnaires used in earlier telephone interview projects (Frey,

1989; Clark, 1990; college image surveys in 1991 and 1997.) The draft was reviewed by several college administrators and faculty members and revised for initial use. In the early stages of interviewing, some changes in wording were made for greater clarity and easier flow of the interview process and to add response options to some of the items. The final interview questionnaire (see Appendix II) represents the fifth revision of the instrument.

The project director spent a total of 20 hours on questionnaire development and revision.

Preparation of Interview Forms for use by Telephone Interviewers

A randomly arranged list of 513 college identification numbers (of the 513 students in the target population) was provided to the Records office with a request for the generation of the following materials:

> Mailing labels in the randomly arranged order with the name, address, and telephone number of each student from the most recent college records. Each mailing label was then affixed to the top right corner of the first page of a blank questionnaire.
>
> A selective transcript of the courses taken by each student during Fall 1996 and Spring 1997 semesters, again in the randomly arranged order.

Prior to beginning interviews, a labeled questionnaire was matched with a transcript, courses in the target subjects only (see "Selection of Students", above) were hand transcribed to page 2 of the questionnaire (see sample questionnaire in Appendix II), and the transcript was stapled to the back of the questionnaire for easy future reference. In this way, 513 individualized questionnaires were prepared for the telephone interviewing phase of the study.

Interviewers

The project director interviewed and hired a temporary secretary for 40 hours of work to include telephone interviewing, data entry, and assistance in final report preparation.

The project director then recruited and trained 7 current students as telephone interviewers. Training included review of "Instructions to Telephone Interviewers" (see Appendix II), trial interviews with one another and with the project director, and continued oral practice with the interview schedule until each interviewer was completely comfortable with the script, skips depending upon student responses, and potential problems before conducted a first student interview.

Interviewing

The bulk of the interviewing was done between September 15 and 27 during a total of 36 evening and weekend hours. These interviews were conducted from the registration area at San Juan

College, where as many as 5 student interviewers and the project director could be on the phone at the same time. The project director supervised all interviewing, coded and reviewed all completed interviews for accuracy and clarity, conducted all long distance interviews, and conducted other interviews as time allowed. In addition to the September calls, the temporary secretary and the director made calls in October to clean up unfinished business.

The director spent 40 hours on interview supervision or making interview calls; student interviewers spent a total of 76 hours on the phone.

Employer Interviews

A short employer interview was developed (see Appendix III) and used to interview 61 of 75 employer names provided by respondents. The project director did all employer interviewing, and passed on suggestions to college administrators as appropriate. Supervisors who were not interviewed were out of town, could not be reached in the short time available, or no longer worked for the employer. Interviewing time was about 10 hours.

Data Analysis and Report Preparation

In addition to recorded student responses to items on the survey questionnaire, a few other items of information about each student were available for analysis. These included zip code of the mailing address; course number, title, and grade of each target course taken; sex; ethnicity, and number of calls required to complete the questionnaire or reason why the questionnaire could not be completed.

All data were entered into a data base prepared by the Director of Institutional Research, Grant Development, and Planning, who also tabulated the results for the project director. The temporary secretary spent 12 hours on the entry of interview data.

The project director wrote the final report, made corrections after draft review by several college administrators, and handled details for publication in a total of about 45 hours. Invaluable help in typing tables and preparing the final document for publication was provided by the administrative secretary in the Office of Institutional Research, Grant Development and Planning.

APPENDIX II

INSTRUCTIONS TO
TELEPHONE INTERVIEWERS

San Juan College Survey of Part-Time Students
Fall 1997

1. Each questionnaire has a label affixed indicating a particular individual we wish to interview. Before making the first call, record courses taken in 1996-97 from the transcript to the matrix on p. 2 of the questionnaire. Interview only the person named at the top of the questionnaire. If not at home, ask for a good time to call again when she/he is likely to be home. (Do not leave a number for the student to call back.)

2. Make as many calls as necessary to complete each interview. Let the phone ring at least 7 times. Hang up if you get an answering machine.

3. If you dial and get a recording for a disconnected number, no answer, a busy signal, etc. -- immediately dial again to be sure you have not misdialed before going on to the next call. Do not use the redial button on the phone.

4. Record the appropriate information on the call record sheet each time you attempt to reach someone. Use abbreviations for "results" such as 'COMP" for completed interview, "BY" for a busy signal, or an "NA" for no answer.

5. SMILE as you talk on the phone -- it comes through!

6. Record all pertinent verbatim comments EXACTLY AS STATED.

7. Avoid giving either positive or negative feedback for responses; remain neutral and friendly in the manner in which you conduct the interview.

8. Read all questions EXACTLY as written. If the respondent doesn't understand, reread the question.

9. If more comments or suggestions are given than you have room to record, use the back of the page and write "over" in the space allotted for comments.

10. If you get the question, HOW DO I KNOW THIS SURVEY IS LEGITIMATE? say, "call Dr. Nelle Moore, Director of Institutional Research and Planning, San Juan College, at 599-0438.

11. Be sure to mark your time sheet each time you come in to work.

SAN JUAN COLLEGE
PART-TIME STUDENT TELEPHONE INTERVIEW
FALL 1997

Student label here

Call Record **N=287 Students interviewed**
Number of calls required for interview:

Call Number:	1	2	3	4	5 or more
Day & Date	134 (47%)	64 (22%)	39 (14%)	17 (6%)	33 (12%)
Time, am or pm					
Interviewer					
Result					
Notes:					

Hello, my name is (__your first and last name__) and I am calling for San Juan College. I would like to speak with (__Student's first & last name__) please.

* [If student is speaking, go directly to Introduction below.]

** [If wrong number, doesn't live here anymore, etc., ask:] Do you know where we might be able to reach __(name)__? [record the response:]_____

*** [If not available, say:] I'll be glad to call back later. When would be the best time to reach ___(name)___? _____

**** [If the speaker knows nothing about the student, terminate the call with something like:] Thanks anyway. I'm sorry to have bothered you.

[when student is on the line]

Introduce yourself again if the student did not answer the phone. (Name, from San Juan College)

INTRODUCTION

We're doing telephone interviews with some of the students who were enrolled for one or two courses last year, and I'd like to ask you a few questions about the courses you took. The survey will take less than five minutes and is strictly confidential. Would that be OK?

NEXT PAGE FOR Q. 1.

Q.1.A. According to the list I have, you took [read the name of the first course listed below] last year. Can you tell me your primary reason or goal for taking this course -- was it to

1. Improve your job skills
2. Obtain a promotion or raise at work
3. Earn credits toward a certificate or degree
4. Personal interest
5. Or some other reason

[Record the number of the reason in column one, below, and go to Q. 1.B.]

Course (write in from transcript)	CODE	Q.1.A. Reason	Q.1.B. Goal Acht (5=high)	Q.1.C. Satisfaction (5=high)
186 courses 155 people	1	177 (56%)	4 (1%)	3 (1%)
	2	9 (3%)	11 (3%)	12 (4%)
	3	40 (13%)	43 (14%)	43 (14%)
	4	84 (26%)	110 (35%)	98 (31%)
	5	8 (3%)	149 (47%)	161 (51%)
	Total N	318	318	318

Q.1.B. How well did you achieve this goal, on a scale of 5 to 1 with 5 equal to "very high" and 1 as "very low"? [Record response in column 2 above. Go to Q. 1.C.]

[Alternative phrasing:] Was the course successful in improving your job skills?
Or ---Did the course satisfy your personal interest in __(subject)__?
[but . . . always get a response from 5 to 1 with 5 as most successful.]

NOTE: If the student failed the course, or withdrew because he/she didn't like the course, code Q.1.B. as "8"; if withdrew because of personal or family problems, etc., code as "9". CONTINUE TO ASK THE REMAINING QUESTIONS.

Q. 1C. How would you rate your satisfaction with the course in general -- the quality of instruction, organization of the course, experiences in labwork, and so on. Again, please use a scale from 5 to 1 with 5 as "excellent course", 3 as "neutral" and 1 as "poor quality". [Record in 3d column above.]

[ASK THE SAME THREE QUESTIONS OF THE SECOND, THIRD, ETC., COURSES LISTED ABOVE.

Would you like to add any other comments about your experiences in the course(s)?
[Record verbatim here.] _____
_____
_____

[IF THE STUDENT INDICATED A JOB-RELATED REASON for taking ANY COURSE (response 1 or 2 in column 1), SKIP TO Q.3., next page.

[If the student did not indicate a goal of "1" or "2" for Q. 1A, ask Q.2., top of next page:]

[ASK ONLY IF NO COURSE HAD A JOB-RELATED GOAL, responses 1 or 2.]

Q.2. Have you ever taken a course at San Juan College primarily to improve your job skills, or to obtain a promotion or raise at work?

36	**(27%)**	Yes	1
96	**(71%)**	No	2
3	**(2%)**	Other or NA	3
135	**Total N**		

If "yes", ask:

N=32
5=63%
4=22%
3= 6%
2= 6%

2.B. What course(s)? _____

2.C. When enrolled? _____

2.D. Did the course(s) help you on the job, on a scale from 5 to 1 with 5 as "very helpful" to 1 as "not at all helpful"? _____

_____

[SKIP TO Q.7.]

[ASK STUDENTS WHO TOOK AT LEAST ONE COURSE FOR A JOB-RELATED REASON]

Q.3. You said you took a course (or some courses) to improve your job or employment skills. Were you employed at the time you took the course(s)?

145	**(97%)**	Yes	1
5	**(3%)**	No	2
150	**Total N**	Other or NA	3

[If No or Other, skip to Q. 7]

[If Yes:]

Q. 4. Did your employer pay part or all of the expenses for you to take the course(s)?

72	**(50%)**	All	1
18	**(12%)**	Part	2
53	**(37%)**	None	3
2	**(1%)**	NA	4
145	**Total N**		

Q. 5. In your opinion, did your performance on the job improve as a result of taking this course (or courses)?

126	**(88%)**	Yes	1	
13	**(9%)**	No	2	
3	**(2%)**	Mixed	3	Probe: _____
2	**(1%)**	NA	4	
144	**Total N**			

Q.6. Would you mind if we called your supervisor at work to ask his or her opinion of the contribution of SJC courses to your job performance?

75	**(52%)**	1. OK to call [record information on the next page.]
20	**(14%)**	2. No one to call -- self-employed, student owns the company, etc.
16	**(11%)**	3. No -- people I worked for no longer there.
24	**(17%)**	4. Other reason for not calling, other than refusal.
9	**(6%)**	5. Refused -- doesn't want us to call.
144	**Total N**	

Employer _____

Supervisor's name _____

Phone number _____

Thanks for this information. Now, to move on,

Q.7. Do you expect to take other courses at San Juan College from time to time?

245	**(85%)**	Yes	1
13	**(5%)**	No	2
29	**(10%)**	Uncertain	3
287	**Total N**	NA	4

[If No or Uncertain, skip to "OK" etc, before Q. 9.]

[If "yes", ask:]

Q. 8. What probably will be your primary reason for taking future courses?

118	**(48%)**	1. Improve your job skills
1	**(----)**	2. Obtain a promotion or raise at work
51	**(21%)**	3. Credits toward a certificate or degree
74	**(30%)**	4. Personal interest
2	**(1%)**	5. Other reason
246	**Total N**	

OK, I think that's enough about courses. Now I'd like to ask you a couple of questions about yourself.

Q. 9. Are you currently [READ; CIRCLE ONE NUMBER.]

208	**(73%)**	employed full time	1
30	**(11%)**	employed part time	2
8	**(3%)**	looking for work	3
11	**(4%)**	a student	4
16	**(6%)**	a full time homemaker	5
11	**(4%)**	retired	6
3	**(1%)**	other activity	7
287	**Total N**		

Q. 10. What is the highest educational degree you have completed? [READ; CIRCLE ONE]

9	**(3%)**	less than high school completion	1
41	**(14%)**	high school graduate or G.E.D.	2
107	**(37%)**	some college	3
32	**(11%)**	associate degree or vocational certificate	4
66	**(23%)**	four-year college degree	5
32	**(11%)**	graduate study or degree	6
287	**Total N**	NA	7

Q.11. Are you now working toward a degree or certificate from San Juan College?

42	**(15%)**	Yes	1
215	**(76%)**	No	2
26	**(9%)**	Maybe in the future	3
284	**Total N**		

THIS CONCLUDES OUR SURVEY. DO YOU HAVE ANY QUESTIONS, OR WOULD YOU LIKE TO MAKE ANY ADDITIONAL COMMENTS? THANK YOU FOR YOUR TIME AND HELP WITH THIS STUDY.

INTERVIEWER: If the student asks why we're doing this survey, you can tell them:

> the primary purpose of the study is to find out reasons why some students take only one or two classes a semester and whether or not the courses they take are helpful to them in their work.

Write any other comments about this interview here.

APPENDIX III

SAN JUAN COLLEGE
PART-TIME STUDENT TELEPHONE INTERVIEWS
FOLLOW-UP WITH EMPLOYERS
FALL 1997

Employer:_____ Supervisor:_____

Employee:_____ Phone: _____

Course(s):_____

Call record: Time 1:_____
2:_____
3:_____

We've been interviewing some students enrolled last year who were taking one or two courses to improve their job skills. _____ is one of the people interviewed, and she/he says she/he was working for you at the time she/he took a course in _____. Can you estimate for me the . . .

1. Contribution of the course to _____'s work performance last year, on a scale from 5 to 1 with five equal to very helpful and 1 as not at all helpful.

   _____

2. In general, do you encourage employees to take classes? _____
   What kinds of classes?_____
   Pay for classes? _____
   Provide time off from work to take classes?_____

   In your experience, how helpful are the classes to the employees' performance on the job?

   _____

3. General satisfaction with San Juan College educational programs in preparing people for work force performance: _____

4. Suggestions regarding training needs: _____
   _____

5. Have you served on a vocational program advisory committee?_____

   Helpfulness of this experience?

6. Other comments:

APPENDIX IV

	REASON			
	Work	Degree	Personal	ALL
COURSE	N	N	N	N
ACCT124	3	.	.	3
ACCT125	6	1	2	9
ACCT201	5	.	1	6
ACCT202	1	.	.	1
ACCT220	1	.	.	1
ACCT231	.	.	1	1
AUBO295	.	.	6	6
AUTE113	1	.	.	1
AUTE295	8	.	.	8
BADM114	2	.	.	2
BADM134	3	.	1	4
BADM150	6	.	.	6
BADM160	2	1	6	9
BADM162	2	.	.	2
BADM230	.	1	.	1
BADM236	1	.	.	1
BADM238	2	.	.	2
BADM239	1	.	.	1
BADM242	.	.	1	1
BADM246	.	.	1	1
BADM262	1	1	.	2
BADM264	3	.	1	4
BADM270	.	.	1	1

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(CONTINUED)

	REASON			
	Work	Degree	Personal	ALL
COURSE	N	N	N	N
BADM290	2	.	1	3
BIOL224	.	1	.	1
BIOL230	.	1	.	1
BIOL252	.	3	.	3
BIOL258	.	1	1	2
BIOL285	.	2	.	2
BUED111	1	2	2	5
BUED115	1	.	.	1
BUED116	1	.	1	2
BUED118	1	.	.	1
BUED123	1	1	.	2
BUED125	4	.	.	4
BUED203	.	.	1	1
BUED210	8	.	4	12
BUED216	5	.	1	6
BUED252	2	.	1	3
BUED280	1	.	.	1
BUED290	1	.	.	1
CHEM110	.	4	1	5
COSC111	10	2	13	25
COSC115	3	.	.	3
COSC116	5	.	.	5
COSC118	2	.	1	3

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(CONTINUED)

	REASON			
	Work	Degree	Personal	ALL
COURSE	N	N	N	N
COSC125	9	3	4	16
COSC185	2	.	.	2
COSC214	2	.	1	3
COSC218	.	1	.	1
COSC262	1	.	.	1
COSC270	1	.	.	1
COSC295	19	.	1	20
DIME144	1	.	.	1
DIME295	1	.	1	2
DRFT110	3	.	.	3
DRFT119	1	.	.	1
DRFT150	4	.	1	5
DRFT260	5	.	1	6
ECED116	.	.	1	1
ECED120	2	1	.	3
ECED124	.	1	.	1
ECED125	1	.	.	1
ECED132	1	.	.	1
ECED265	1	.	.	1
ECED295	1	1	.	2
ECON251	.	1	.	1
ENGL299	.	.	2	2
GEOL110	.	3	.	3

(CONTINUED)

	REASON			
	Work	Degree	Personal	ALL
COURSE	N	N	N	N
HLTH110	2	1	.	3
HLTH118	.	.	1	1
HMSV115	.	1	.	1
HMSV220	.	1	.	1
HMSV299	3	.	.	3
MASH120	1	.	1	2
MASH130	.	.	1	1
MASH295	4	.	3	7
MATH095	1	.	.	1
MATH185	.	.	1	1
MATH188	.	.	2	2
MATH215	.	1	.	1
MATH251	.	.	1	1
PHYS211	.	1	.	1
PSYC265	1	.	.	1
SPAN111	10	.	5	15
SPAN112	3	.	5	8
SPAN211	1	1	.	2
SPCH110	1	1	.	2
SPCH111	2	.	.	2
WELD229	1	.	.	1
WELD295	5	1	4	10